

<u>Customer / Project name:</u> S-Chem	<u>Date:</u> 31.10.2021
<u>Project Details:</u> Site Execution Service, Inspection and Overhaul on Extruder Machines at Unit 42,43 & 44 (SPCO SOUTH)	<u>Compiled by:</u>
<u>Equipment:</u> Unit 42,43 & 44	<u>Project no:</u> 25000942
<u>Customer Contact:</u> S-CHEM	<u>Machine number:</u>
<u>Remarks:</u> Required tools tackles for Extruder overhauling	

1. Tools and devices provided by Expertise / S-Chem

Hydraulic tools		
Designation	Dimension	Quantity
Hydraulic torque wrench (Hytorc 3,5,8,10)	Up to 10.000 Nm	2
Hydraulic aggregate which fits to torque wrench		
Set of hexagon sockets:	36 mm	2
	41 mm	2
	46 mm	2
	50 mm	2
	55 mm	2
	60 mm	2
	65 mm	2
	75 mm	2
Set of allen key sockets:	14 mm	2
	17 mm	2
	19 mm	2
	22 mm	2
	27 mm	2
	32 mm	2
	36 mm	2
	41 mm	2
Hydraulic jack	20 ton	4
Hydraulic hand pump	Up to 1600 bar	2
Hydraulic hose	Up to 3000 bar	2
Lifting equipment		
Chain hoist	1 ton	2
	2 ton	2
	5 ton	4
	10 ton	4
Eye bolts	M 10 / 12 / 16 / 20 / 24 / 30 / 36 /	each 6
Swivel eye bolt	M 30 / 36 / 42	each 4
D shackle	Various sizes for listed eye bolts	each 4
Belt Sling	1 ton	4
	5 ton	4
	10 ton	4

Consumables / Auxiliary's		
Designation	Dimension	Quantity
Loctite 243	bottle	2
Molykote P 37	Can 500g	4
Oil stone	fine	10
Cleaning rag's	White cloths	30 kg
Cleaning solvent	Spray can	40 L
Cleaning oil (WD 40)	Spray can	40 L
Square wood	150 x 150 x 1000 mm	30
Scotch brite (3M red one)	Carton	10
Wire brush		10
Sandpaper	Sheets / Various corning	each 50
Heat resistance (welding) gloves to work on hot equipment	Regular size	20 pair
Plastic bags / trash bags	100 L	50
Power Rope	Ø 15mm	100 m
Extruder special tools (tools delivered with the project by Coperion)		
Screw tip wrench	material 20130708	1
Screw tensioning cylinder	material 15017441	1
Hand lever pump	material 15046469	1
Hose	material 10046470	1
Wrench for screw coupling	material 20435977	1
Barrel clamp	material 20416373	6
Screw shaft mounting device	material 20435610	2
Cheese head screw M42 x 180	material 10000314	2
Pull off device	material 20435896	1
Adjusting device	material 20435643	1
Mechanical and hand tools		
Hammer	250g / 500g / 5kg	each 2
Rubber hammer	Standard size	2
Couper or brass hammer	250g	2
Brass wedges	Standard size	6
Spirit level	1m	2
Tape measure	5m	5
Pin punch	Set	2
Chisel	Set	2
Scraper		20
Metal hand saw		2
Files	Round / square / triangle	each 2
Pipe wrench		each 2
Circlip plier inside and outside	Ø 10mm to Ø 300mm	each 2
Flat plier	Set	2
Tapping tool for inside and outside thread metrical size	M6 to M30	each 2
Screw driver	Set	4
Open Wrench	10 to 75 mm	each 2
Ring wrench	10 to 36 mm	
Ratchet box	¼" set	2
Ratchet box	½" set	2

Mechanical and hand tools		
Designation	Dimension	Quantity
Crow bar		10
Allen key	2 mm to 41 mm	each 2
Drill bit	2 mm to 15 mm	each 2
Torque wrench	0 – 150Nm	2
	150 – 250Nm	2
	250 – 500Nm	2
	500 – 1000Nm	2
Angle grinder		2
Hand drill machine		2

2. Devices machines provided by S-CHEM

Machines		
Designation	Dimension	Quantity
Flat trailer (model: drop deck) To move the parts from monorail lifting out of the building Height of trailer should be around 1m / 40"	Min. capacity 10 ton	1
Mobile crane for lifting / loading unloading the flat trailer	Min. 50 ton capacity	1
Aqua jetting machine	Min. pressure of 2500 bar	1
Fork lift Mainly for handling barrel no 1 / inlet barrel.	5 ton capacity	1
Jack pallet	2.5 ton	2
Devices		
Graphite gaskets for blinding all steam supply and return lines of discharge	Quantity and size need to be checked and recorded in advance to have everything ready	
Blind flanges for blinding all steam supply and return lines of discharge	Quantity and size need to be checked and recorded in advance to have everything ready	